

# DISPOSITION FORM

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REFERENCE OR OFFICE SYMBOL

NCBCO-S

SUBJECT

Investigation of the Placement of Fill Material  
in Freshwater Wetlands Adjoining Lake Abram, Berea,  
Cuyahoga County, OH

TO

THRU: Chief, Env. Ana. Sec. <sup>FROM</sup> Robert Rothman  
Chief, Reg. Funcs. Br.  
TO: Chief, Mon. & Enf. Sec.

DATE

2 Dec 77 CMT 1  
ROTHMAN/jr/2323

## 1. Purpose

The purpose of this report is to summarize the field observations relative to the placement of fill material in freshwater wetlands and to determine whether or not this activity falls within Corps jurisdiction under Section 404 of the Federal Water Pollution Control Act Amendments of 1972.

## 2. Background

2.1 In September 1977 Professor Emeritas Tom C. Surrarrer reported to the Monitoring and Enforcement Section that certain individuals had engaged in the mining of muck and the placement of fill in wetlands adjoining Lake Abram in Cuyahoga County, OH. Mr. Surrarrer noted that a large portion of wetland acreage immediately east of Eastland Road had already been filled, see Inclosure 1.

2.2 On 17 November the Environmental Analysis Section conducted an on-site survey of those wetlands associated with Lake Abram, Abram Creek, and Lake Isaac. Accompanying Paul Leuchner and Rob Rothman of the Environmental Analysis Section, were Bob Owens of the U.S. Fish and Wildlife Service, Bob Maccaske of Ohio Natural Resources, Fred Mueller of the Enforcement Section, Professor Surrarrer, retired biology professor from Baldwin-Wallace College in Berea, OH, and Stephen Cole, of the Cleveland Metro-Park System (CMPS).

## 3. Location

3.1 The fill activities discussed in this report involve the freshwater wetlands adjacent to Lake Abram, Middleburg Heights, OH. Lake Abram and its associated marshlands occupy a preglacial depression which forms the principle drainage corridor for Abrams Creek, a tributary to Rocky River.

3.2 Specifically, the lake and adjoining marsh covers a total area of about 54 acres and is generally bordered by Eastland, Engle, Sheldon and Bagley Roads. Lake Abram is fed by Abram Creek which has a year round average flow greater than five cubic feet per second.

3.3 A general location map is attached to this report as Inclosure One.

## 4. Nature of the Activities Investigated

4.1 During this investigation, three separate fill areas were identified in the Lake Abram area. Two of these sites are located at the landward edge of the wetland between the lake and Eastland Road. The individuals responsible for the placement of

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fill in this area are Frank Costa, Costa Cement Contracting Co., 6829 Eastland Road, Middleburg Heights, OH and Emil Fabrizi, Fabrizi Trucking and Paving, 389 Columbia Road, Valley City, OH. A third site involves the placement of fill several hundred feet beyond the perimeter of the wetland bordering the east side of Lake Abram. Deposition of fill in the area is being conducted by Zehman-Wolf Company, 13484 Cedar Road, Cleveland, OH 44118. Deposition of fill at all three sites is occurring for the sole purpose of replacing bottom land and wetland with dry land. The land will then be used for industrial purposes.

4.2 At the Fabrizi site, fill consisting of foundry sand, waste concrete, construction debris and other materials have been deposited at the edge of the Lake Abram wetland. At the time of this site inspection, several areas exhibiting soil saturated conditions and a prevalence of wetland vegetation, had already been covered by the fill. Continued filling toward Lake Abram will result in the rapid and permanent loss of wetland habitat.

4.3 Filling activities conducted by Frank Costa are somewhat different. At this site, marshland soils are being excavated and stockpiled for future sale as top soil. As the excavation proceeds large open water areas are created. Eventually, these open water areas must be filled so that excavation equipment can be moved further into the Lake Abram marsh. At present this operation only involves the edge of Lake Abram marsh and loss of wetland acreage is probably less than one acre.

4.4 The fill site on the east side of Lake Abram does not involve freshwater wetlands at this point in time. However, the tendency in this area is to move lakeward with the fill. Should this operation proceed unchecked it is likely that the wetland encroachment will occur within a short period of time.

4.5 A detailed diagram showing the extent of fill at each of the sites investigated is attached to this report as Inclosure Two.

## 5. Environmental Setting

5.1 Lake Abram and its associated wetlands occupy a total surface area of about 54 acres. It is a part of a 385 acre chain of freshwater wetlands, ponds, and lakes that occupies the Abram Creek drainage corridor between the Ohio Turnpike and Sheldon Road. In general, saturated soil conditions are sustained by a highwater table, low soil permeability, and a low elevation gradient throughout the Abram Creek drainage corridor.

5.2 The Lake Abram wetlands adjacent to fill sites were mapped to determine principle plant cover types and general species composition. Cover typing was performed on a qualitative basis and no attempt was made to use quantitative sampling techniques. Where practical, wetland plants were identified either to genus or species using the following references, A Field Guide to Wildflowers, Peterson & McKenny and The Aquatic Plants, G.W. Prescott. Inclosure 2 and 3 delineate principle cover types identified.

5.3 Predominant species within the lake margins and surrounding marshland flats include cattail (Typha sp.) aquatic smartweed (Polygonum sp.), and several species of

sedge (Carex sp.) Rushes (Juncus sp.), and rice cut grass (Leersia orysooides) appeared sporadically throughout the area. Other important species noted were water plantain (Alixma sp.), arrowhead (Sagittaria sp.), arrow arum (Peltandra virginica) and button bush (Cephalanthus occidentalis). Species that commonly denoted the out perimeter or fringe of marshland consisted of aquatic smartweed and cattail. In other areas bordering the subject wetlands silky dogwood (Cornus sp.) willow (Salix sp.) and cottonwood (Cottonwood sp.) dominated. This type of community is indicative of moist and/or saturated soil conditions, but unlike the cattail community, it is usually associated with an elevation gradient and improved drainage.

5.4 Habitat conditions for waterfowl were ideal as evidenced by high number of migratory birds resting and feeding there. Resident populations also utilize the site and nesting paris have been documented there. Several plant species noted above are common and important food source for waterfowl. Specifically, aquatic smartweed, rice cut grass and arrowhead were identified throughout the area and are considered valuable food sources for waterfowl. Arrow arum seed pods, which is especially important for wood ducks was also observed in abundance. Expansive growths of cattail and sedges provide valuable cover for nesting birds and concealment for other animals. In addition, cattail roots are a primary food source for muskrat and sedge seeds provide food for many wildlife species. Another important plant found throughout Lake Abram wetlands was round-stemmed bullrush, which again is an important and common food for ducks, geese and muskrat.

5.5 Mammalian species known in the area include at least a dozen species identified by Baldwin-Wallace college students and the Corps survey team.

#### MAMMALS

Muskrat  
Raccoon  
Skunk  
Opossum  
Eastern Cottontail Rabbit

Eastern Fox Squirrel  
Eastern Chipmunk

Shorttail Shrew  
Masked Shrew  
White-footed Mouse  
Deer Mouse  
Eastern Gray Squirrel (Should be confirmed by additional observations)  
White-Tailed Deer  
Red Fox

#### 6. Wetland Evaluation Factors

The subject wetlands were evaluated under the criteria setforth in the publication Wetland Values - Interim Assessment and Evaluation Methodology prepared by Larry Messman, Richard Reppert and Eugene Stakhly, U.S. Army Engineer Institute for Water Resources, Fort Belvoir, Virginia.

6.1 Food chain production: Abundant food production was evidenced by the identification of several plant species considered important wildlife food sources (ie. arrow arum, arrowhead, rushes, rice cut grass, sedges, willow, etc.). It should be

noted that the investigation was conducted at a time (mid November) when seasonal decomposition had destroyed evidence on many plant species common to the area. Resident bird and mammal populations described in Section 5 are additional verification that substantial food stuffs do indeed occur in the subject wetlands.

6.2 General and Specialized Habitat: The vegetation diagram, Inclosure 3, shows the various habitat types that are available and provide necessary cover and seclusion for the wildlife inhabiting the area. For example, the adjacent woodlands are important for deer seeking cover and protection, yet they graze on the willow and dogwood plants that occur within the subject wetland. Muskrats, raccoons and waterfowl utilizes the many isolated niches provided by the thick cattail and sedge growths for nesting and cover. The red fox, which also occurs there, takes advantage of the heavy growth to stalk its prey as well as cover purposes. In general, the diverse and luxuriant plant growth available at the subject wetland is responsible for a varied and abundant wildlife population presently inhabiting the area.

6.3 Sanctuaries and Refuges: Adjoining openwater and wetlands, Isaac Lake, has recently been acquired for the explicit purpose to preserve it as a wildlife refuge. Mr. Cole of CMPS has assisted Mr. Surrarrer in efforts to conserve the Lake Abram wetlands so that in time the CMPS may eventually appropriate the necessary funds to expand the Isaac Lake refuge to include the Abram Lake area.

6.4 Storage for Storm and Flood Water: The capacity for Abram Lake and associated lowlands to act as holding basin at times of heavy run-off is substantial. If fill activity continues unchecked, the resultant pool capacity will be reduced and threat of floods further downstream increased.

6.5 Natural Groundwater Recharge: The natural depression within the subject wetland lies could play an important stabilization role in regional hydrology. During dry periods the marsh acts as a groundwater recharge area for any underlying or adjacent aquifers by the process of flow percolation through the relatively impermeable organic and muck strata. In addition, because of the high water table that sustains the subject wetland, it serves to maintain base stream flow and thus serves to sustain the overall integrity of regional drainage.

6.6 Water Quality: The marshland surrounding Lake Abram contributes to the improvement of water quality by acting as a retention and filtration basin for silt and man introduced contaminants.

6.7 Recreation/Aesthetics: CMPS has already invested time and money to preserve the Lake Isaac area as a wildlife refuge and has indicated an interest in the remaining wetlands of the area (which include Lake Abram). Plans have been developed to create public trail system throughout the area. In addition, the Lake Abram area which lies in the heart of an industrial area provides a natural heritage of the past that is easily accessible for future generations to enjoy.

## 7. Conclusion/Recommendations

7.1 In conclusion, Lake Abram and its associated marshlands are a critical, significant and unique natural area that merits preservation. It has been described as one of Ohio's largest inland wetland areas and because of its proximity to an urban environment, it is regarded as a valuable and aesthetic natural resource. Continued encroachment will lead to further degradation and ultimately decimate a productive wetland resource. Continued placement of fill will effectively reduce the capacity of this wetland as a water retention and absorption basin increasing the potential for downstream flooding and degradation of water quality.

7.2 Field studies indicate that fill material is being deposited on the perimeter of a freshwater wetland as defined in subsection 323.2, Title 33, Chapter II of the Corps regulations governing administration of the regulatory permits program. Further, the subject wetland lies adjacent to a large freshwater lake that is located downstream of the head waters limit of Abram Creek.

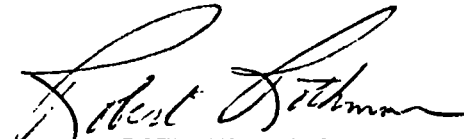
7.3 Based on the findings of this investigation the following recommendations are made:

a. Issue cease work orders to Costa and Fabrizi to halt the placement of fill in the freshwater wetlands bordering Lake Abram and advise both parties that Department of the Army permits must be secured before such activities can resume.

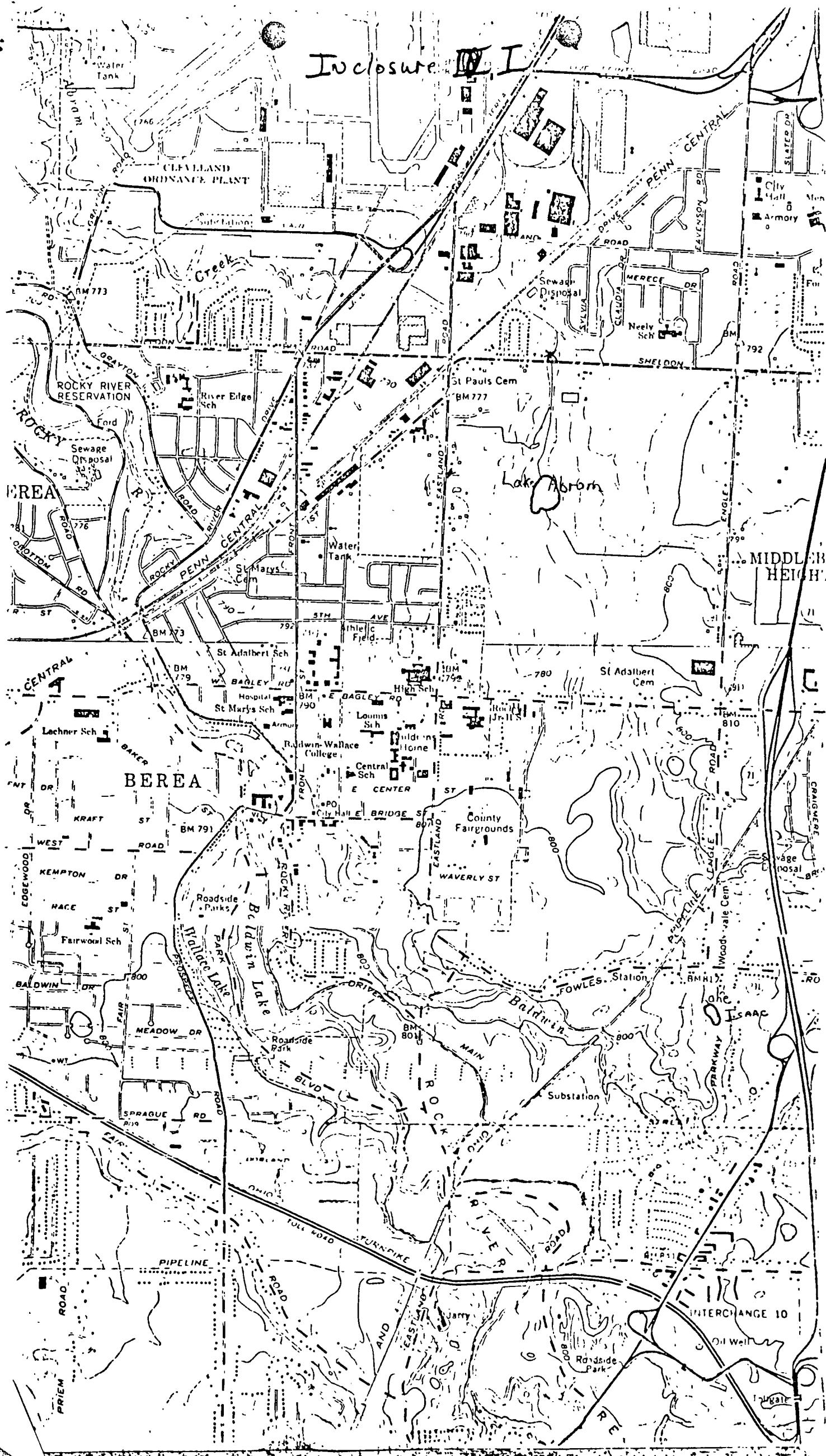
b. Inform Zehman-Wolf Company, 13484 Cedar Road, Cleveland, OH 44118 that their fill site is located adjacent to a freshwater wetland and that placement of fill in such areas without a Department of the Army permit is a violation of Section 404 of the Federal Water Pollution Control Act of 1972.

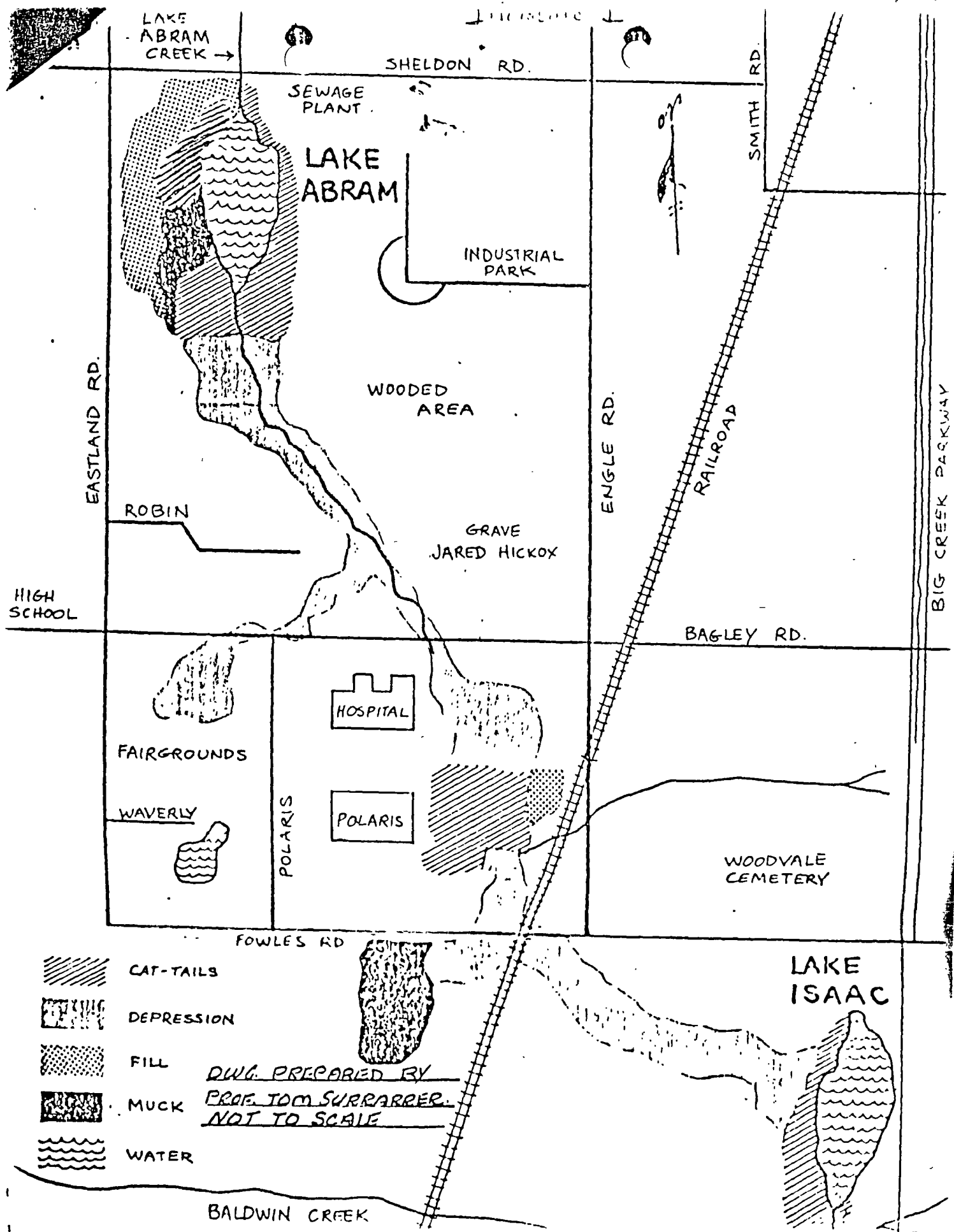
c. Advise all property owners bordering Lake Abram of the Corps regulation authority under Section 404 of the FWPCA in an attempt to curtail the unauthorized placement of fill in waters and wetlands of the United States.

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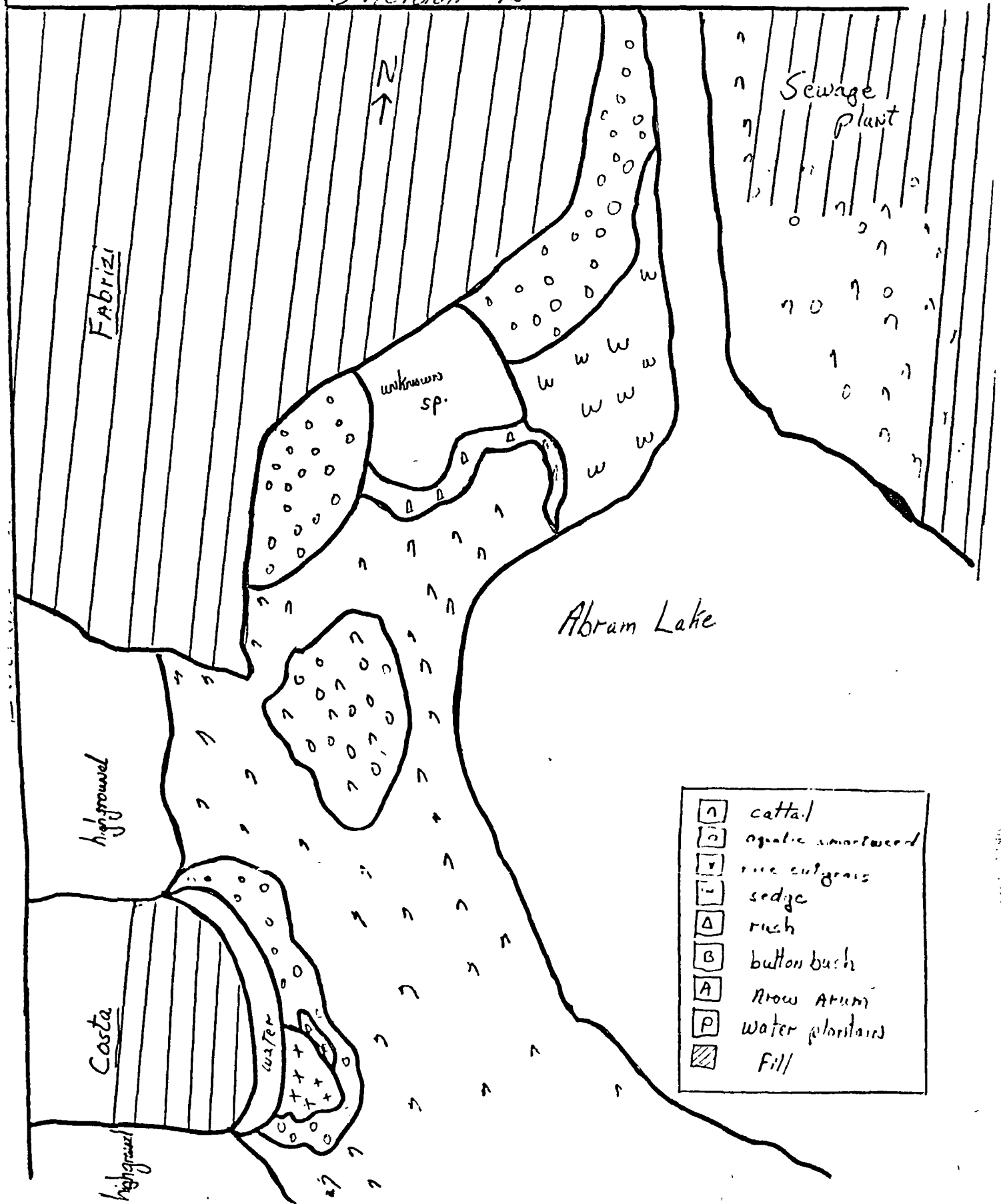
  
ROBERT ROTHMAN, Biologist  
Environmental Analysis Section  
Regulatory Functions Branch

# Inclosure I





Inlosure II  
Sheldon Rd



|   |                   |
|---|-------------------|
| n | cattail           |
| o | aquatic smartweed |
| v | rice cutgrass     |
| w | sedge             |
| Δ | rush              |
| B | button bush       |
| A | Arrow Arum        |
| P | water plantains   |
| ▨ | Fill              |



# Inchlosure III

